REMARKS

The Office examined claims 1-3, 9-17, and 22-27 are now pending in the application, of which only claims 1, 14, and 27 are independent, and rejected same but found that claims 3, 10-13 and 15 include allowable subject matter.

With this paper, the claims are changed in a way believed unrelated to patentability but so as to overcome rejections under 35 USC §112, second paragraph, and also to make some slight changes (in claims 1 and 14) believed useful in improving readability, and reconsideration is requested.

Rejections under 35 USC §112, second paragraph

At section 13 of the Office Action, claims 3, 10-13 and 15 are rejected under 35 USC §112, second paragraph.

With this paper, these claims are changed in a way believed sufficient to overcome the grounds of rejection.

Accordingly, applicant respectfully requests that all rejections under 35 USC §112, second paragraph be withdrawn.

Rejections under 35 USC §102

At section 2 of the Office action, claims 1, 14, 16, 17 and 27 are rejected under 35 USC §102 as being anticipated by Yanagihara *et al*. (U.S. Pub. 2003/0152032).

In applicant's response to the previous Office action, in consequence of the Office insisting that the recitation of "receiving as feedback one or more bits set to indicate low congestion" is to be understood broadly so as to encompass substantially more than merely what are sometimes termed flag bits or special bits predetermined to convey the presence or absence of some attribute, applicant amended claims 1 and 14 to distinguish from Yanagihara, by reciting performing an

accelerated start so as to reach maximum throughput in less time by changing to a second starting point for the rate of transmission greater than a first starting point and greater than the current rate of transmission, and then increasing the rate of transmission starting from the second starting point. Applicant asserted that Yanagihara nowhere teaches or suggests such an accelerated start, aimed at decreasing the time to reach maximum throughput, as indicated in the application at Figures 3 and 4.

The Office now asserts that:

> Yanagihara teaches an accelerated start (Figure 7) because *any method of increasing transmission rate* in response to low congestion can be read as an accelerated start as claimed.. As long as the transmission rate is kept increasing, the second starting point will be greater than both the first starting point and the current point. Therefore, maximum throughput will be reached ... in less time than the time it would have taken if the second starting point were [the] same as the first stating point. [Emphasis added.]

Applicant respectfully submits that not just "any method of increasing transmission rate" can suffice as a grounds of rejecting the subject claims (1, 14, 16, 17 and 27). The method must include changing to a *second starting* point as recited, i.e. a starting point (rate of transmission) greater than the first starting point (rate of transmission) and greater than the current rate of transmission, and *then increasing the rate of transmission starting from the second starting point*, based on feedback from the receiver.

In the rejections, the Office relies on S31 of Figure 7. S31 is shown in Figure 7 as executed in "Case 5" (explained at par. [0090] as "a case where congestion is avoided" meaning presumably that there is no evidence of congestion based on values of jitter and loss rate provided in the receiver report). At S31, the rate of transmission is set to the minimum of

rate_max and rate*b (where b is e.g. 1.5 per Figure 8) in the event of the indicator labeled "state_cong" having a value of 0 (false). (State_cong is shown in Figure 8 as having a value of 1 "if congestion occurred in previous control," and a value of 0 "otherwise.")

So according to Yanagihara, each time case 5 occurs, the rate of transmission is increased by e.g. 50% or capped at the maximum possible rate. The Office asserts that this is the same as *changing to a second starting point* having a higher rate of transmission than the first and also higher than the current, in response to receiving an *indication of low congestion*, *and then increasing the rate* from this new starting point based on *feedback*. But Yanaighara simply teaches increasing the rate of transmission whenever Case 5 occurs. The Office is therefore not distinguishing between simply increasing the transmission rate on the one hand, and changing to a new starting point and increasing the transmission rate starting from the new starting point. There is a distinction made in the claims, though. The claims recite starting from a new starting point in case of receiving "an indication of low congestion" but increasing the rate of transmission from the starting point "based on feedback received from the receiver telecommunication device." The claims themselves therefore make a distinction. This claim language is clearly intended to refer to the disclosure at page 14, beginning line 9, which provides:

> Referring now to Fig. 1B, as is explained in more detail below, according to the invention, to accelerate throughput of segments from the sender 30 to the receiver 40, in a first step 20a, the sender 30 *begins* transmitting segments to the receiver *at* a predetermined *starting rate* of transmission, *and increases* the *rate* of transmission *based on acknowledgments* it receives from the receiver 40. In case of TCP applications, the sender protocol layer 30a starts a congestion window (cwnd) at some initial size

> (iwnd) (e.g. two or four segments) and initially increases the congestion window by one segment each time it receives an acknowledgement for a segment it has sent. In a next step 20b, the sender (30) receives an *indication of low congestion* (from either the receiver 40 or from an intermediate node 50. In a next step 20c, the sender 30 performs an accelerated start, i.e. the sender increases the rate of transmission by some predetermined amount, to some *re-initialized starting rate of transmission*, *and then increases the rate of transmission at a rate of increase based on received positive acknowledgments (ACKs)*. In case of TCP, the sender sets a slow start threshold (SSTHRES) to 65535 and re-initializes the congestion window (cwnd) value to a new predetermined value--depending on whether a high or low congestion has occurred--and then grows the congestion window (cwnd) at a predetermined rate in respect to received positive acknowledgments (ACKs), typically one segment per received ACK. [Emphasis added.]

Thus, the "feedback" recited in the subject claims is e.g. an acknowledgment of the previous transmission, and is distinguished from the recited "indication of low congestion," and the increasing based on the feedback, starting from the starting point is modest, which motivates the invention. Time is wasted getting to an optimum rate of transmission by just this "increasing the rate of transmission starting from the ... starting point," as illustrated in Figures 3 and 5. So instead, the invention provides the "accelerated start" which involves resetting the starting point.

So the starting from a starting point at a greater rate of transmission must be distinguished from increasing the rate of transmission from the starting point, but there is no such distinction made by Yanagihara. Indeed, Yanagihara teaches only one "start" step, i.e. step S19 of Figure 7. There is no starting again from a second starting point and then increasing the rate of transmission from the second starting point.

Accordingly, applicant respectfully requests that all the rejections under 35 USC §102 be withdrawn.

Rejections under 35 USC §103

At section 4 of the Office action, claims 2 and 22-26 are rejected under 35 USC §103 as being unpatentable over Yanagihara.

At least because the claims from which these depend are believed allowable for the reasons given above, applicant respectfully requests that the rejections under 35 USC §103 be withdrawn.

Conclusion

For all the foregoing reasons it is believed that all of the claims of the application are in condition for allowance and their passage to issue is earnestly solicited. Applicant's attorney urges the Examiner to call to discuss the present response if anything in the present response is unclear or unpersuasive.

Respectfully submitted,

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